

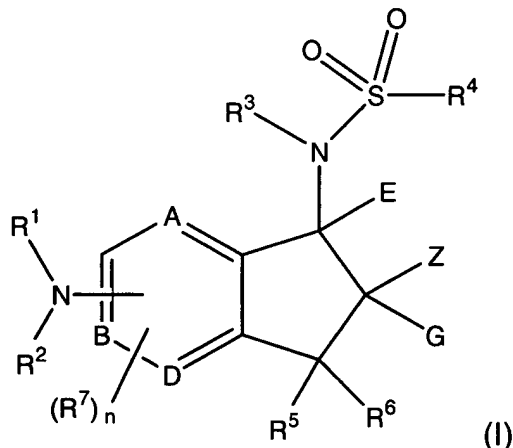
IN THE CLAIMS:

Please make the following amendments to claims 1 through 17

THIS FOLLOWING LISTING OF CLAIMS REPLACES ALL PRIOR VERSIONS OF CLAIMS IN THE APPLICATION:

Listing of claims

1. (Currently amended) A compound having potassium channel inhibitory activity of formula (I), or a pharmaceutically acceptable salt ~~or prodrug~~ thereof:



wherein,

B
A, B, and D are ~~selected from a]~~ substituted carbon atoms, ~~a nitrogen atom, or N→O, wherein at least one of A, B, and D is a substituted carbon atom and at most only one of A, B and D is N→O;~~

E is hydrogen, or alkyl; G is hydrogen, or alkyl; or E and G taken together form a bond (site of unsaturation);

R¹ is selected from hydrogen, alkyl, carbocycloalkyl, aryl, (aryl)alkyl, heterocyclo, (heterocyclo)alkyl, heteroaryl, and (heteroaryl)alkyl;

R² is selected from alkyl, carbocycloalkyl, aryl, (aryl)alkyl, heterocyclo, (heterocyclo)alkyl, heteroaryl, and (heteroaryl)alkyl, each of which may be optionally substituted;

R³ is selected from hydrogen (H), alkyl, carbocycloalkyl, aryl, (aryl)alkyl, heterocyclo, (heterocyclo)alkyl, heteroaryl, (heteroaryl)alkyl, aminoalkyl; substituted aminoalkyl, carboxyalkyl, alkoxyalkanoyl, aminoalkanoyl, substituted aminoalkanoyl, alkanoylamidoalkyl, alkanoyl(substituted amido)alkyl, aroylamidoalkyl, aroyl(substituted amido)alkyl, heterocyclocarbonylamidoalkyl, heterocyclocarbonyl(substituted amido)alkyl, heteroaroylamidoalkyl, and heteroaroyl(substituted amido)alkyl;

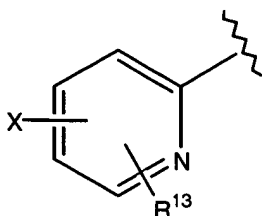
R⁴ is selected from alkyl, carbocycloalkyl, aryl, (aryl)alkyl, heteroaryl and heterocyclo;

R⁵ and R⁶ are each independently selected from hydrogen, fluoro and alkyl, or R⁵ and R⁶ taken together, along with the carbon atom to which they are both attached, form a 3-membered to 7-membered carbocyclic, or heterocyclic ring;

R⁷ is independently selected from hydrogen, alkyl, hydroxy, alkoxy, amino, substituted amino, nitro, cyano, halo, carboxy, alkoxy carbonyl, aminocarbonyl, substituted aminocarbonyl and n is 1, 2 or 3; and

Z is selected from hydrogen, alkyl, hydroxy, SH, alkoxy, aryloxy, alkylthio, amino, substituted amino, alkoxy carbonyl, alkanoylamido, aroylamido, heterocyclocarbonylamido, heteroaroylamido, alkanoyl(alkylsubstituted) amido, aroyl(alkylsubstituted)amido, heteroaroyl(alkylsubstituted)amido, and heterocyclocarbonyl(alkyl substituted)amido.

2. (Currently Amended) The compound of claim 1 having potassium channel inhibitory activity, or a pharmaceutically acceptable salt or pro-drug thereof wherein R² is



wherein

X is selected from substituted amino, -N(R⁸)COR⁹, -N(R⁸)SO₂R¹⁰, and -CO-NR¹¹R¹²;

R⁸ is selected from hydrogen (H), alkyl, aryl and heteroaryl;
R⁹ is selected from alkyl, carbocycloalkyl, alkenyl, alkynyl, aryl, alkoxy, aryloxy, heterocyclo, heteroaryl, (aryl)alkyl, (heteroaryl)alkyl, amino and substituted amino;
R¹⁰ is selected from alkyl, carbocycloalkyl, aryl, heterocyclo and heteroaryl;
R¹¹ and R¹² are independently selected from hydrogen(H), alkyl, carbocycloalkyl, aryl, heterocyclo, heteroaryl, (aryl)alkyl, (heterocyclo)alkyl, (heteroaryl)alkyl, aminoalkyl, and substituted aminoalkyl, or R¹¹ and R¹² taken together with the nitrogen atom to which they are attached form a 4-membered to 8-membered heterocyclic ring;
R¹³ is selected from hydrogen (H), alkyl, aryl, hydroxy, alkoxy, amino, substituted amino, nitro, cyano and halo.

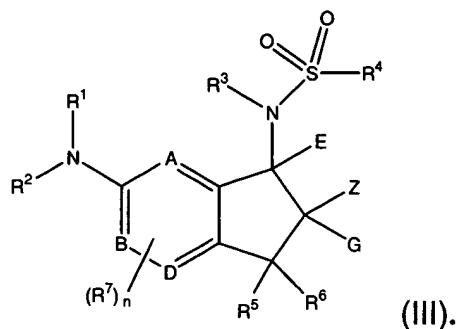
3. (Currently Amended) The compound of claim 1 having potassium channel inhibitory activity, or a pharmaceutically acceptable salt ~~or prodrug~~ thereof wherein ~~A, B and D are each a substituted carbon atom~~; E, G and R⁷ are each hydrogen and n is 3.

4. (Currently Amended) The compound of claim 3 having potassium channel inhibitory activity, or a pharmaceutically acceptable salt ~~or prodrug~~ thereof wherein, R⁵ and R⁶ are each hydrogen.

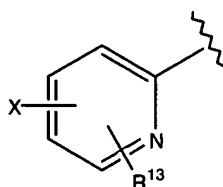
5. (Currently Amended) The compound of claim 2 having potassium channel inhibitory activity, or a pharmaceutically acceptable salt ~~or prodrug~~ thereof wherein ~~A, B and D are each a substituted carbon atom~~; E, G and R⁷ are each hydrogen and n is 3.

6. (Currently Amended) The compound of claim 5 having potassium channel inhibitory activity, or a pharmaceutically acceptable salt ~~or prodrug~~ thereof wherein, R⁵ and R⁶ are each hydrogen.

7. (Currently Amended) The compound of claim 1 having potassium channel inhibitory activity, said compound having the following formula (III), or a pharmaceutically acceptable salt ~~or prodrug~~ thereof:



8. (Currently Amended) The compound of claim 7 having potassium channel inhibitory activity, or a pharmaceutically acceptable salt ~~or prodrug~~ thereof wherein R² is



wherein

X is selected from -N(R⁸)COR⁹ and -CO-NR¹¹R¹²;

R⁸ is selected from H and alkyl;

R⁹ is selected from alkyl, carbocycloalkyl, alkenyl, alkynyl, aryl, alkoxy, aryloxy, heterocyclo, heteroaryl, (aryl)alkyl, (heteroaryl)alkyl, amino and substituted amino;

R¹¹ and R¹² are independently selected from hydrogen(H), alkyl, carbocycloalkyl, aryl, heterocyclo, heteroaryl, (aryl)alkyl, (heterocyclo)alkyl, (heteroaryl)alkyl, aminoalkyl, and substituted aminoalkyl, or R¹¹ and R¹² taken together with the nitrogen atom to which they are attached form a 4-membered to 8-membered heterocyclic ring; and

R¹³ is selected from hydrogen, alkyl, hydroxy, alkoxy, amino, substituted amino, nitro, cyano and halo.

9. (Currently Amended) The compound of claim 7 having potassium channel inhibitory activity, or a pharmaceutically acceptable salt ~~or prodrug~~ thereof wherein ~~A, B and D are each a substituted carbon atom~~; E, G and R⁷ are each hydrogen and n is 3.

10. (Currently Amended) The compound of claim 9 having potassium channel inhibitory activity, or a pharmaceutically acceptable salt ~~or prodrug~~ thereof wherein, R⁵ and R⁶ are each hydrogen.

11. (Currently Amended) The compound of claim 8 having potassium channel inhibitory activity, or a pharmaceutically acceptable salt ~~or prodrug~~ thereof wherein ~~A, B and D are each a substituted carbon atom~~; E, G and R⁷ are each hydrogen and n is 3.

12. (Currently Amended) The compound of claim 11 having potassium channel inhibitory activity, or a pharmaceutically acceptable salt ~~or prodrug~~ thereof wherein, R⁵ and R⁶ are each hydrogen.

13. (Currently Amended) The compound of claim 1, 3, 4, 7, 9 or 10 having potassium channel inhibitory activity, or a pharmaceutically acceptable salt ~~or prodrug~~ thereof, wherein
R³ is selected from hydrogen and alkyl;
R⁴ is selected from aryl and heteroaryl and
Z is selected from hydrogen, hydroxyl, amino and substituted amino.

14. (Currently Amended) The compound of claim 2, 5, 6, 8, 11, or 12 having potassium channel inhibitory activity, or a pharmaceutically acceptable salt ~~or prodrug~~ thereof, wherein
R³ is selected from hydrogen and alkyl;
R⁴ is selected from aryl and heteroaryl and
Z is selected from hydrogen, hydroxyl, amino and substituted amino.

15. (Currently Amended) A pharmaceutical composition comprising the compound of claim 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, or 12, or a pharmaceutically acceptable salt ~~or prodrug~~ thereof and a pharmaceutically acceptable diluent or carrier.

16. (Currently Amended) A pharmaceutical composition comprising the compound of claim 13, or a pharmaceutically acceptable salt ~~or prodrug~~ thereof and a pharmaceutically acceptable diluent or carrier.

17. (Currently Amended) A pharmaceutical composition comprising the compound of claim 14, or a pharmaceutically acceptable salt or ~~prodrug~~ thereof and a pharmaceutically acceptable diluent or carrier.

18. (Original) A method for inhibiting potassium transport across cellular membranes possessing potassium channels comprising exposing a cell membrane possessing said channels to the presence of a compound of claim 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, or 12, or a pharmaceutically acceptable salt or prodrug thereof.

19. (Original) The method of claim 18 wherein the potassium channel is a voltage gated potassium channel.

20. (Original) The method of claim 19 wherein the potassium channel is selected from a potassium channel responsible for cardiac I_{Kur} potassium current, a potassium channel responsible for T-lymphocyte I_{Kn} potassium current and potassium channels containing one of Kv1.5 or Kv1.3 α -subunit gene products.

✓ 21. (Original) A method for treating cardiac arrhythmias which comprises administering to a patient in need thereof, a pharmaceutically effective amount of a compound of claim 1, 2, 3, 4, 5, 6, or 7, or a pharmaceutically acceptable salt or prodrug thereof.

22. (Original) A method for treating a cell-proliferative disorder which comprises administering to a patient in need thereof, a pharmaceutically effective amount of a compound of claim 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, or 12, or a pharmaceutically acceptable salt or prodrug thereof.